

P20968.P01

# UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.

P20968

Total Pages

 Inventor(s) or Application Identifier  
 Yasuaki YUDA, Takashi FUKAGAWA, Youichi  
 NAKAGAWA, and Masahiro MIMURA

 Title: DIRECTION OF ARRIVAL ESTIMATOR AND  
 DIRECTION OF ARRIVAL ESTIMATION METHOD

ADDRESS TO:

 Assistant Commissioner for Patents  
 Box Patent Application  
 Washington, DC 20231

## APPLICATION ELEMENTS

## ACCOMPANYING APPLICATION PARTS

1. ☒ Fee Transmittal Form  
(Submit an original, and a duplicate for fee processing)
2. ☐ Applicant claims small entity status.  
See 37 CFR 1.27.
- a. ☐ Small Entity Statement(s)
3. ☒ Specification (preferred arrangement set forth below) [Total Pages 15 ]
- Descriptive title of the Invention
  - Cross References to Related Applications
  - Statement Regarding Fed sponsored R & D
  - Reference to sequence listing, a table, or a computer program listing appendix
  - Background of the Invention
  - Brief Summary of the Invention
  - Brief Description of the Drawings (if filed)
  - Detailed Description
  - Claim(s)
  - Abstract of the Disclosure
4. ☒ Drawing(s) (35 USC 113) [Total Sheets 4 ]
5. ☒ Oath or Declaration [Total Pages 4 ]
- a. ☒ Newly executed (original or copy) ☐ Unexecuted
- b. ☐ Copy from a prior application (37 CFR 1.63(d))  
(for continuation/divisional with Box 20 completed)  
[Note Box 6 below]
- i. ☐ DELETION OF INVENTOR(S)  
Signed statement attached deleting inventor(s)  
named in the prior application, see 37 CFR  
1.63(d)(2) and 1.33(b).
6. ☐ Incorporation By Reference (useable if Box 5b is checked)  
The entire disclosure of the prior application, from which a  
copy of the oath or declaration is supplied under Box 5b, is  
considered as being part of the disclosure of the accompanying  
application and is hereby incorporated by reference therein.
7. ☐ Application Data Sheet. See 37 CFR 1.76
8. ☐ CD-Rom or CD-R in duplicate, large table or Computer  
Program (Appendix)

9. Nucleotide and/or Amino Acid Sequence Submission  
(if applicable, all necessary)
- a. ☐ Computer Readable Form (CRF)
- b. Specification Sequence Listing on:
- i. ☐ CD-ROM or CD-R (2 copies); or
- ii. ☐ paper
- c. ☐ Statements verifying identity of above copies
10. ☒ Assignment Papers (cover sheet & document(s))
11. ☐ 37 CFR 3.73(b) Statement ☐ Power of Attorney  
(when there is an assignee)
12. ☐ English Translation Document (if applicable)
13. ☐ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS Citations
14. ☐ Preliminary Amendment
15. ☒ Return Receipt Postcard (MPEP 503)  
(Should be specifically itemized)
16. ☒ Figure of Drawing to be published 1
17. ☒ Foreign priority claimed
- a. ☒ Claim of Priority
- b. ☒ Certified Copy of Priority Document(s)
18. ☒ Assignee: MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD. of Osaka, JAPAN
19. ☐ Other: \_\_\_\_\_

20. If a CONTINUING APPLICATION, check appropriate box and supply the requisite information:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior Application No. \_\_\_\_\_ / \_\_\_\_\_, filed \_\_\_\_\_  
 Prior application information: Examiner: \_\_\_\_\_ Group Art Unit: \_\_\_\_\_
21. ☐ Amend the specification by inserting before the first line the sentence:
 This application is a    continuation-in-part,    continuation,    divisional, of Application No. \_\_\_\_\_ / \_\_\_\_\_, filed \_\_\_\_\_.
Address all future correspondence to **Customer No. 7055** at the present address of:
 GREENBLUM & BERNSTEIN, P.L.C.  
 1941 Roland Clarke Place  
 Reston, VA 20191  
 (703) 716-1191

Date

5/2/01

Signature

 [Signature]  
 33,329

 Bruce H. Bernstein, Reg No. 29,027  
 Typed or Printed Name

<b>FEE TRANSMITTAL</b>		<b>Complete if Known</b>	
		Application Number	Not Yet Assigned
		Filing Date	Concurrently Herewith
		First Named Inventor	Y. YUDA et al.
		Group Art Unit	Unassigned
		Examiner Name	Unassigned
<b>TOTAL AMOUNT OF PAYMENT</b> (\$) <b>750.00</b>		<b>Attorney Docket Number</b> P20968	

  

METHOD OF PAYMENT (check one)	FEE CALCULATION (continued)																																																																																																																																																																																																																																																																																																				
<p>1. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge indicated fees and credit any overpayments to:</p> <p>Deposit Account Number <u>19-0089</u></p> <p>Deposit Account Name <u>GREENBLUM &amp; BERNSTEIN, P.L.C.</u></p> <p> <input checked="" type="checkbox"/> Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17, including any required extension of time fees in any concurrent or future reply requiring a petition for extension of time for its timely submission (37 CFR 1.136(a)(3))           <input type="checkbox"/> Charge the Issue Fee Set in 37 CFR 1.18 at the Mailing of the Notice of Allowance, 37 CFR 1.311(b)           <input type="checkbox"/> Applicant Claims Small Entity Status See 37 CFR 1.27.         </p> <p> <input checked="" type="checkbox"/> Payment Enclosed:           <input checked="" type="checkbox"/> Check    <input type="checkbox"/> Credit Card    <input type="checkbox"/> Money Order    <input type="checkbox"/> Other         </p> <p><b>FEE CALCULATION</b> (fees effective 12/29/99)</p> <p><b>FILING FEE</b></p> <table style="width:100%;"> <tr> <th>Large Fee Code</th> <th>Entity Fee (\$)</th> <th>Small Fee Code</th> <th>Entity Fee (\$)</th> <th>Fee Description</th> <th>Fee Paid</th> </tr> <tr> <td>101</td> <td>710</td> <td>201</td> <td>355</td> <td>Utility filing fee</td> <td>710</td> </tr> <tr> <td>106</td> <td>320</td> <td>206</td> <td>160</td> <td>Design filing fee</td> <td></td> </tr> <tr> <td>107</td> <td>490</td> <td>207</td> <td>245</td> <td>Plant filing fee</td> <td></td> </tr> <tr> <td>108</td> <td>710</td> <td>208</td> <td>355</td> <td>Reissue filing fee</td> <td></td> </tr> <tr> <td>104</td> <td>150</td> <td>214</td> <td>75</td> <td>Provisional filing fee</td> <td></td> </tr> <tr> <td colspan="5"><b>SUBTOTAL (1)</b> (\$)</td> <td><b>710</b></td> </tr> </table> <p><b>CLAIMS</b></p> <table style="width:100%;"> <tr> <th>Total Claims</th> <th>Extra</th> <th>Fee from below</th> <th>Fee Paid</th> </tr> <tr> <td>9</td> <td>-20=</td> <td>0 x 18</td> <td>= 0</td> </tr> <tr> <td>Independent</td> <td>3</td> <td>-3=</td> <td>0 x 80 = 0</td> </tr> <tr> <td>Multiple Dependent Claims</td> <td></td> <td></td> <td>= 0</td> </tr> </table> <table style="width:100%;"> <tr> <th>Large Fee Code</th> <th>Entity Fee (\$)</th> <th>Small Fee Code</th> <th>Entity Fee (\$)</th> <th>Fee Description</th> <th>Fee Paid</th> </tr> <tr> <td>103</td> <td>18</td> <td>203</td> <td>9</td> <td>Claims in excess of 20</td> <td></td> </tr> <tr> <td>102</td> <td>80</td> <td>202</td> <td>40</td> <td>Independent claims in excess of 3</td> <td></td> </tr> <tr> <td>104</td> <td>270</td> <td>204</td> <td>135</td> <td>Multiple dependent claim</td> <td></td> </tr> <tr> <td>109</td> <td>80</td> <td>209</td> <td>40</td> <td>Reissue independent claims over original patent</td> <td></td> </tr> <tr> <td>110</td> <td>18</td> <td>210</td> <td>9</td> <td>Reissue claims in excess of 20 and over original patent</td> <td></td> </tr> <tr> <td colspan="5"><b>SUBTOTAL (2)</b> (\$)</td> <td><b>0.00</b></td> </tr> </table>	Large Fee Code	Entity Fee (\$)	Small Fee Code	Entity Fee (\$)	Fee Description	Fee Paid	101	710	201	355	Utility filing fee	710	106	320	206	160	Design filing fee		107	490	207	245	Plant filing fee		108	710	208	355	Reissue filing fee		104	150	214	75	Provisional filing fee		<b>SUBTOTAL (1)</b> (\$)					<b>710</b>	Total Claims	Extra	Fee from below	Fee Paid	9	-20=	0 x 18	= 0	Independent	3	-3=	0 x 80 = 0	Multiple Dependent Claims			= 0	Large Fee Code	Entity Fee (\$)	Small Fee Code	Entity Fee (\$)	Fee Description	Fee Paid	103	18	203	9	Claims in excess of 20		102	80	202	40	Independent claims in excess of 3		104	270	204	135	Multiple dependent claim		109	80	209	40	Reissue independent claims over original patent		110	18	210	9	Reissue claims in excess of 20 and over original patent		<b>SUBTOTAL (2)</b> (\$)					<b>0.00</b>	<p><b>3. ADDITIONAL FEES</b></p> <table style="width:100%;"> <tr> <th>Large Fee Code</th> <th>Entity Fee (\$)</th> <th>Small Fee Code</th> <th>Entity Fee (\$)</th> <th>Fee Description</th> <th>Fee Paid</th> </tr> <tr> <td>105</td> <td>130</td> <td>205</td> <td>65</td> <td>Surcharge - late filing fee or oath or cover sheet.</td> <td></td> </tr> <tr> <td>127</td> <td>50</td> <td>227</td> <td>25</td> <td>Surcharge - late provisional filing fee</td> <td></td> </tr> <tr> <td>139</td> <td>130</td> <td>139</td> <td>130</td> <td>Non-English specification</td> <td></td> </tr> <tr> <td>147</td> <td>2,520</td> <td>147</td> <td>2,520</td> <td>For filing a request for reexamination</td> <td></td> </tr> <tr> <td>112</td> <td>920*</td> <td>112</td> <td>920*</td> <td>Requesting publication of SIR Prior to Examiner action</td> <td></td> </tr> <tr> <td>113</td> <td>1,840*</td> <td>113</td> <td>1,840*</td> <td>Requesting publication of SIR after Examiner action</td> <td></td> </tr> <tr> <td>115</td> <td>110</td> <td>215</td> <td>55</td> <td>Extension for response within 1st month</td> <td></td> </tr> <tr> <td>116</td> <td>390</td> <td>216</td> <td>195</td> <td>Extension for response within 2nd month</td> <td></td> </tr> <tr> <td>117</td> <td>890</td> <td>217</td> <td>445</td> <td>Extension for response within 3rd month</td> <td></td> </tr> <tr> <td>118</td> <td>1,390</td> <td>218</td> <td>695</td> <td>Extension for response within 4th month</td> <td></td> </tr> <tr> <td>128</td> <td>1,890</td> <td>228</td> <td>945</td> <td>Extension for response within 5th month</td> <td></td> </tr> <tr> <td>119</td> <td>310</td> <td>219</td> <td>155</td> <td>Notice of Appeal</td> <td></td> </tr> <tr> <td>120</td> <td>310</td> <td>220</td> <td>155</td> <td>Filing a brief in support of an appeal</td> <td></td> </tr> <tr> <td>121</td> <td>270</td> <td>221</td> <td>135</td> <td>Request for oral hearing</td> <td></td> </tr> <tr> <td>138</td> <td>1,510</td> <td>138</td> <td>1,510</td> <td>Petition to institute a public use proceeding</td> <td></td> </tr> <tr> <td>140</td> <td>110</td> <td>240</td> <td>55</td> <td>Petition to revive unavoidably abandoned application</td> <td></td> </tr> <tr> <td>141</td> <td>1,240</td> <td>241</td> <td>620</td> <td>Petition to revive unintentionally abandoned application</td> <td></td> </tr> <tr> <td>142</td> <td>1,240</td> <td>242</td> <td>620</td> <td>Utility issue fee (or reissue)</td> <td></td> </tr> <tr> <td>143</td> <td>440</td> <td>243</td> <td>220</td> <td>Design issue fee</td> <td></td> </tr> <tr> <td>144</td> <td>600</td> <td>244</td> <td>300</td> <td>Plant issue fee</td> <td></td> </tr> <tr> <td>122</td> <td>130</td> <td>122</td> <td>130</td> <td>Petitions to the Commissioner</td> <td></td> </tr> <tr> <td>123</td> <td>50</td> <td>123</td> <td>50</td> <td>Petitions related to provisional applications</td> <td></td> </tr> <tr> <td>126</td> <td>240</td> <td>126</td> <td>240</td> <td>Submission of IDS</td> <td></td> </tr> <tr> <td>581</td> <td>40</td> <td>581</td> <td>40</td> <td>Recording each patent assignment per property (times number of properties)</td> <td>40</td> </tr> <tr> <td>146</td> <td>710</td> <td>246</td> <td>355</td> <td>Filing a submission after final rejection (37 CFR 1.129(a))</td> <td></td> </tr> <tr> <td>149</td> <td>710</td> <td>249</td> <td>355</td> <td>For each additional invention to be examined (37 CFR 1.129(b))</td> <td></td> </tr> <tr> <td>179</td> <td>710</td> <td>279</td> <td>355</td> <td>Request for Continued Examination (RCE)</td> <td></td> </tr> <tr> <td>169</td> <td>900</td> <td>169</td> <td>900</td> <td>Request for expedited examination of a design application</td> <td></td> </tr> <tr> <td colspan="5">Other fee (specify) _____</td> <td></td> </tr> <tr> <td colspan="5">Other fee (specify) _____</td> <td></td> </tr> <tr> <td colspan="5"><b>SUBTOTAL (3)</b> (\$)</td> <td><b>40</b></td> </tr> </table> <p>*Reduced by Basic Filing Fee paid</p>	Large Fee Code	Entity Fee (\$)	Small Fee Code	Entity Fee (\$)	Fee Description	Fee Paid	105	130	205	65	Surcharge - late filing fee or oath or cover sheet.		127	50	227	25	Surcharge - late provisional filing fee		139	130	139	130	Non-English specification		147	2,520	147	2,520	For filing a request for reexamination		112	920*	112	920*	Requesting publication of SIR Prior to Examiner action		113	1,840*	113	1,840*	Requesting publication of SIR after Examiner action		115	110	215	55	Extension for response within 1st month		116	390	216	195	Extension for response within 2nd month		117	890	217	445	Extension for response within 3rd month		118	1,390	218	695	Extension for response within 4th month		128	1,890	228	945	Extension for response within 5th month		119	310	219	155	Notice of Appeal		120	310	220	155	Filing a brief in support of an appeal		121	270	221	135	Request for oral hearing		138	1,510	138	1,510	Petition to institute a public use proceeding		140	110	240	55	Petition to revive unavoidably abandoned application		141	1,240	241	620	Petition to revive unintentionally abandoned application		142	1,240	242	620	Utility issue fee (or reissue)		143	440	243	220	Design issue fee		144	600	244	300	Plant issue fee		122	130	122	130	Petitions to the Commissioner		123	50	123	50	Petitions related to provisional applications		126	240	126	240	Submission of IDS		581	40	581	40	Recording each patent assignment per property (times number of properties)	40	146	710	246	355	Filing a submission after final rejection (37 CFR 1.129(a))		149	710	249	355	For each additional invention to be examined (37 CFR 1.129(b))		179	710	279	355	Request for Continued Examination (RCE)		169	900	169	900	Request for expedited examination of a design application		Other fee (specify) _____						Other fee (specify) _____						<b>SUBTOTAL (3)</b> (\$)					<b>40</b>
Large Fee Code	Entity Fee (\$)	Small Fee Code	Entity Fee (\$)	Fee Description	Fee Paid																																																																																																																																																																																																																																																																																																
101	710	201	355	Utility filing fee	710																																																																																																																																																																																																																																																																																																
106	320	206	160	Design filing fee																																																																																																																																																																																																																																																																																																	
107	490	207	245	Plant filing fee																																																																																																																																																																																																																																																																																																	
108	710	208	355	Reissue filing fee																																																																																																																																																																																																																																																																																																	
104	150	214	75	Provisional filing fee																																																																																																																																																																																																																																																																																																	
<b>SUBTOTAL (1)</b> (\$)					<b>710</b>																																																																																																																																																																																																																																																																																																
Total Claims	Extra	Fee from below	Fee Paid																																																																																																																																																																																																																																																																																																		
9	-20=	0 x 18	= 0																																																																																																																																																																																																																																																																																																		
Independent	3	-3=	0 x 80 = 0																																																																																																																																																																																																																																																																																																		
Multiple Dependent Claims			= 0																																																																																																																																																																																																																																																																																																		
Large Fee Code	Entity Fee (\$)	Small Fee Code	Entity Fee (\$)	Fee Description	Fee Paid																																																																																																																																																																																																																																																																																																
103	18	203	9	Claims in excess of 20																																																																																																																																																																																																																																																																																																	
102	80	202	40	Independent claims in excess of 3																																																																																																																																																																																																																																																																																																	
104	270	204	135	Multiple dependent claim																																																																																																																																																																																																																																																																																																	
109	80	209	40	Reissue independent claims over original patent																																																																																																																																																																																																																																																																																																	
110	18	210	9	Reissue claims in excess of 20 and over original patent																																																																																																																																																																																																																																																																																																	
<b>SUBTOTAL (2)</b> (\$)					<b>0.00</b>																																																																																																																																																																																																																																																																																																
Large Fee Code	Entity Fee (\$)	Small Fee Code	Entity Fee (\$)	Fee Description	Fee Paid																																																																																																																																																																																																																																																																																																
105	130	205	65	Surcharge - late filing fee or oath or cover sheet.																																																																																																																																																																																																																																																																																																	
127	50	227	25	Surcharge - late provisional filing fee																																																																																																																																																																																																																																																																																																	
139	130	139	130	Non-English specification																																																																																																																																																																																																																																																																																																	
147	2,520	147	2,520	For filing a request for reexamination																																																																																																																																																																																																																																																																																																	
112	920*	112	920*	Requesting publication of SIR Prior to Examiner action																																																																																																																																																																																																																																																																																																	
113	1,840*	113	1,840*	Requesting publication of SIR after Examiner action																																																																																																																																																																																																																																																																																																	
115	110	215	55	Extension for response within 1st month																																																																																																																																																																																																																																																																																																	
116	390	216	195	Extension for response within 2nd month																																																																																																																																																																																																																																																																																																	
117	890	217	445	Extension for response within 3rd month																																																																																																																																																																																																																																																																																																	
118	1,390	218	695	Extension for response within 4th month																																																																																																																																																																																																																																																																																																	
128	1,890	228	945	Extension for response within 5th month																																																																																																																																																																																																																																																																																																	
119	310	219	155	Notice of Appeal																																																																																																																																																																																																																																																																																																	
120	310	220	155	Filing a brief in support of an appeal																																																																																																																																																																																																																																																																																																	
121	270	221	135	Request for oral hearing																																																																																																																																																																																																																																																																																																	
138	1,510	138	1,510	Petition to institute a public use proceeding																																																																																																																																																																																																																																																																																																	
140	110	240	55	Petition to revive unavoidably abandoned application																																																																																																																																																																																																																																																																																																	
141	1,240	241	620	Petition to revive unintentionally abandoned application																																																																																																																																																																																																																																																																																																	
142	1,240	242	620	Utility issue fee (or reissue)																																																																																																																																																																																																																																																																																																	
143	440	243	220	Design issue fee																																																																																																																																																																																																																																																																																																	
144	600	244	300	Plant issue fee																																																																																																																																																																																																																																																																																																	
122	130	122	130	Petitions to the Commissioner																																																																																																																																																																																																																																																																																																	
123	50	123	50	Petitions related to provisional applications																																																																																																																																																																																																																																																																																																	
126	240	126	240	Submission of IDS																																																																																																																																																																																																																																																																																																	
581	40	581	40	Recording each patent assignment per property (times number of properties)	40																																																																																																																																																																																																																																																																																																
146	710	246	355	Filing a submission after final rejection (37 CFR 1.129(a))																																																																																																																																																																																																																																																																																																	
149	710	249	355	For each additional invention to be examined (37 CFR 1.129(b))																																																																																																																																																																																																																																																																																																	
179	710	279	355	Request for Continued Examination (RCE)																																																																																																																																																																																																																																																																																																	
169	900	169	900	Request for expedited examination of a design application																																																																																																																																																																																																																																																																																																	
Other fee (specify) _____																																																																																																																																																																																																																																																																																																					
Other fee (specify) _____																																																																																																																																																																																																																																																																																																					
<b>SUBTOTAL (3)</b> (\$)					<b>40</b>																																																																																																																																																																																																																																																																																																

SUBMITTED BY				Complete (if applicable)	
Typed or Printed Name		Bruce H. Bernstein		Reg. Number	29,027
Signature				Date	5/2/01
		33,329		Deposit Account User ID	